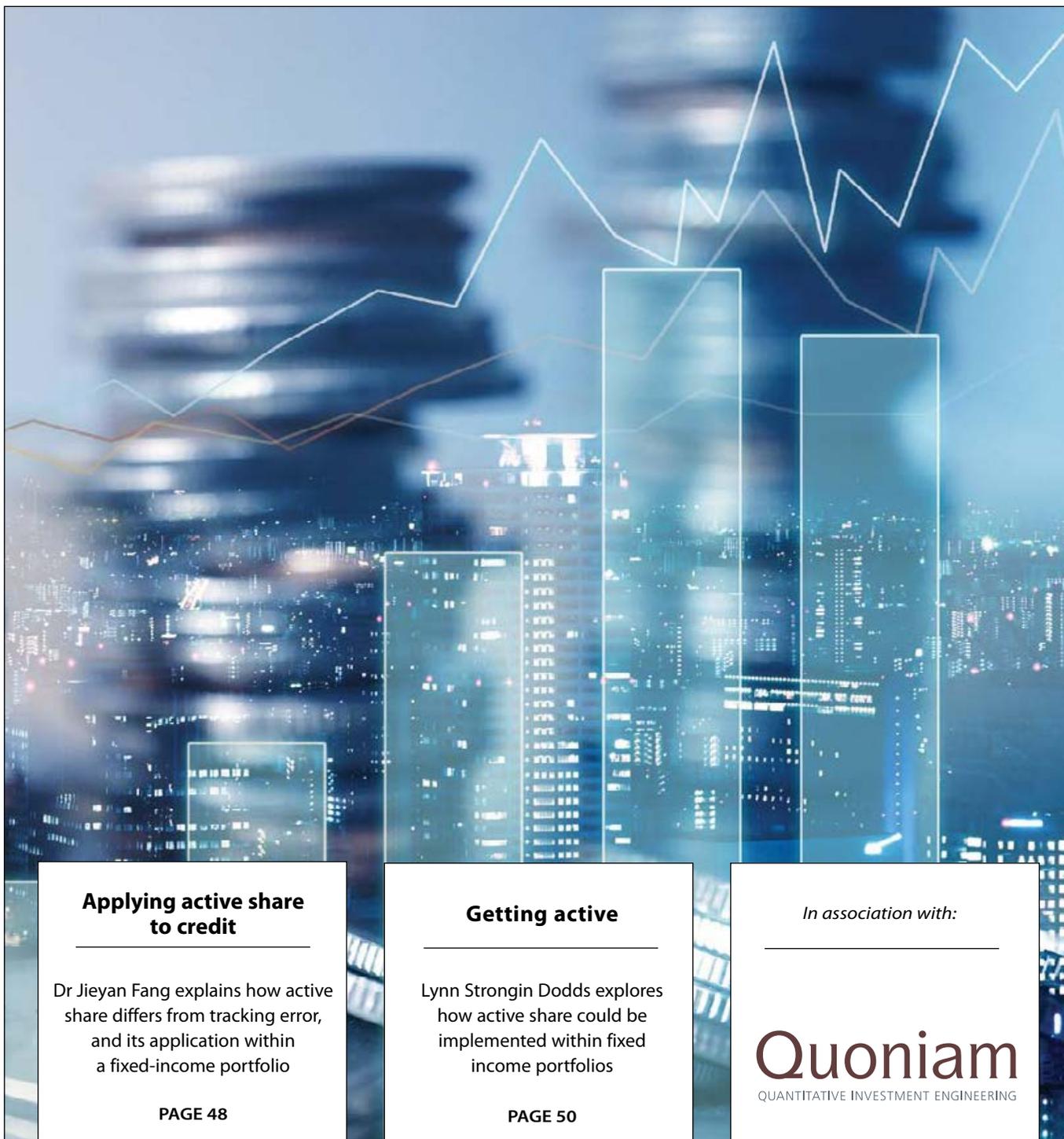


# Active share focus: SHEDDING SOME LIGHT



## Applying active share to credit

---

Dr Jieyan Fang explains how active share differs from tracking error, and its application within a fixed-income portfolio

PAGE 48

## Getting active

---

Lynn Strongin Dodds explores how active share could be implemented within fixed income portfolios

PAGE 50

*In association with:*

---

# Quoniam

QUANTITATIVE INVESTMENT ENGINEERING

## Applying active share to credit



Quoniam Asset Management GmbH senior analyst, fixed income research, Dr Jieyan Fang

Dr Jieyan Fang talks to *European Pensions* about how Active Share differs from Tracking Error, and its application within a fixed-income portfolio

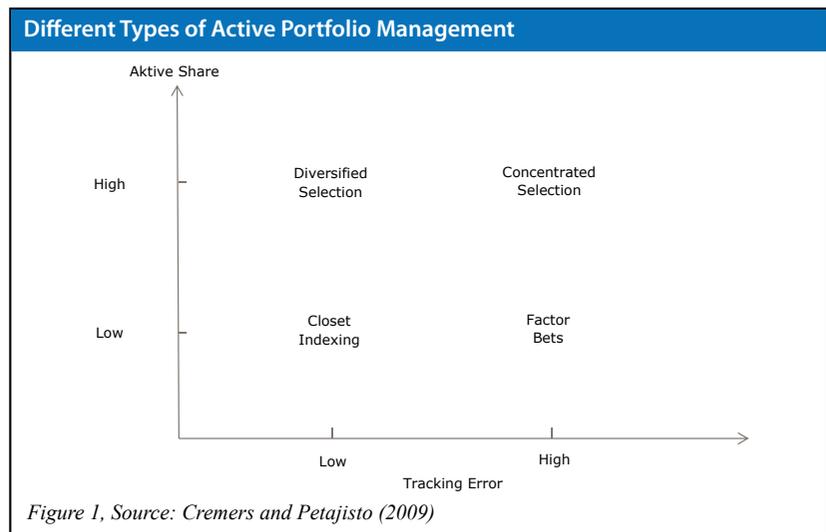
**Please can you explain exactly what Active Share is and how it is used within an investment portfolio?**

Active share was introduced by Cremers/Petajisto (2009). It is a holding based measure. This means Active Share is used to calculate the percentage of the fund's holding that differs from the benchmark holding. The Active Share of a portfolio usually varies between 100 per cent – in case that all portfolio holdings are not included within the benchmark – and 0 per cent – in case that portfolio and benchmark are composed of exactly the same holdings. In particular circumstances, where for example leverage and short positions are included, the Active Share of a portfolio can even exceed 100 per cent.

**What is the difference between Active Share and Tracking Error?**

Tracking Error is a common measure looking at the 'activeness of portfolios'. This is defined as the standard deviation of the differences in returns between the investment portfolio and its benchmark. Both measures may at first glance seem similar, but due to the different definitions, Tracking Error and Active Share actually capture different aspects of the activeness of the portfolio.

As mentioned above Tracking Error is calculated by using portfolio and benchmark returns. It considers the covariance between the returns



of the portfolio and the benchmark. Therefore, Tracking Error is strongly influenced by factor exposures and can therefore be used as a proxy for factor bets.

In contrast Active Share is calculated by using portfolio and benchmark holdings. Each position is treated equally. It measures the holding difference between a portfolio and its benchmark. Therefore, Active Share is a proxy for the level of active security or issuer selection.

**Where is Active Share typically used within an investment portfolio? For example, is it used within equities or fixed income asset classes?**

Since Active Share was introduced by Cremers/Petajisto (2009), it is typically applied to equity portfolios both in the fund industry and

academic research. For fixed income the measure is gradually becoming more important.

**Is it possible to apply Active Share to credit portfolios?**

Yes, it is possible to apply Active Share to credit portfolios. The measure provides information about the activeness of the portfolio regarding the issuer selection.

**What should pension fund investors pay attention to if applying Active Share to credit portfolios?**

There is a special feature that should be considered when applying Active Share to credit portfolios. Typically, a company issues different bonds with different characteristics. This leads to the difference between Active Share at bond level and at issuer level. Active Share at issuer

# Quoniam Asset Management

level is generally lower than at bond level, because bonds from one issuer are considered to be equal and the overweight of a certain bond from one issuer in the portfolio does not necessarily lead to an increase of Active Share.

Active Share at bond level treats each bond individually and considers differences in its characteristics. Both forms provide useful information about the activeness of the portfolio.

## How can you identify different asset managers using Active Share and Tracking Error?

This can be achieved by applying the methodology of Cremers/Petajisto (2009) and classifying four different types of active management, as shown in figure 1.

Funds with low Tracking Error and high Active Share are defined as Diversified Selection, focusing on selection instead of factor bets.

Portfolios of the type Concentrated Selection apply both, selection and factor bets. Therefore, we can observe high Active Share and high Tracking Error in this segment.

Factor Bets portfolios show high Tracking Error and low Active Share. These kind of funds do not deal with selection but bet on certain

systematic factors.

Closet Indexing funds do not engage in selection and factor bets. Therefore, they have low Active Share and low Tracking Error.

## How is the cutoff point for Active Share defined?

Cremers/Petajisto (2009) defined the empirical cut-off point for Active Share of equity portfolios as 60 per cent.

Considering the specific characters of credit portfolios and credit benchmarks, it is more difficult for credit portfolios to achieve a high Active Share compared to equity portfolios.

Nevertheless, the funds we manage here at Quoniam have the cut-off point of Active Share at 60 per cent. The cut-off point of the annualised Tracking Error is defined as 1.5 per cent, based on an empirical analysis of the peer group funds (Morningstar Category: EUR Corporate Bond).

## Finally, to put this information into context, please could you provide an example of the application of Active Share and Tracking Error?

In order to illustrate the application of Active Share and Tracking Error, I use one of the mutual funds

managed by Quoniam: Quoniam Funds Selection SICAV – Euro Credit EUR I.

The results are shown in figure 2. The Active Share of this fund as of 31 March 2017 is 70 per cent at issuer level and 88 per cent at bond level, and thus is significantly higher than 60 per cent. Annualised Tracking Error is 0.8 per cent, which is just the 15th percentile of the peer funds.

Based on the definitions of the four types of active management, the Euro Credit EUR I belongs to the Diversified Selection, focusing on the selection of the Euro credit issuers/bonds and shows high Active Share.

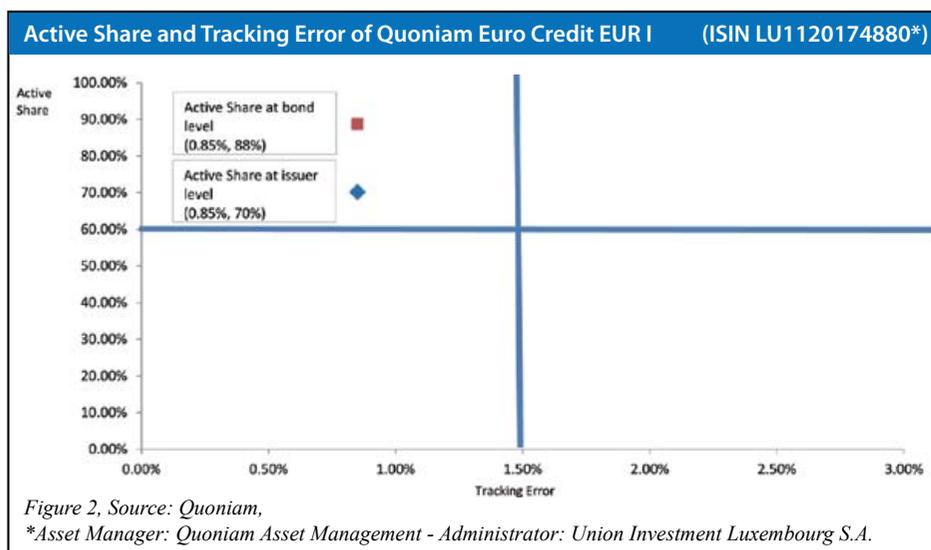
Factor bet on systematic risk factors eg duration, quality and sector, which drives the Tracking Error, is not a main strategy of this fund.

This example illustrates the importance of Active Share, which mainly captures the selection aspect of active management, while Tracking Error indicates factor bets. Even though substantial Active Share is no guarantee for outperformance, the before mentioned fund outperformed the benchmark by +1.2 per cent p.a over the last five years with a Tracking Error of only 0.8 per cent. Nevertheless significant Active Share is an indispensable precondition for outperformance through active bond or issuer selection.

The standalone application of Tracking Error might provide false information about the activeness of credit portfolios. The combination of both measures provides a more complete picture of activeness of credit portfolio. ■

In association with

**Quoniam**  
QUANTITATIVE INVESTMENT ENGINEERING



## INVESTMENT

# Getting active

Lynn Strongin Dodds explores how active share could be implemented within fixed income portfolios

WRITTEN BY LYNN STRONGIN DODDS

**A**ctive share, which measures how much a fund's holdings deviate from its benchmark index, has gained a following in the equity space as regulators and investors bear down on active managers to prove their worth. However, it has been slow to catch on in the fixed income realm and views are split as to whether it would be a useful indicator of acumen.

The measure first came onto the scene in the wake of the financial crisis with the publication of a research paper in 2009 from Martijn Cremers from the University of Notre Dame and Antti Petajisto New York University (NYU). They found that equity funds with an active share of 80% or higher (ie, funds holding 80% or more stocks that were outside their benchmarks) beat their indexes on average by 2% to 2.71% before fees, and 1.49% to 1.59% after fees, per year.

Cremers and Petajisto showed that the best active fund managers not only had the highest active share, but also had clear and well defined systems for determining which stocks to buy. They stood out for their disciplined methods as well as their buy and hold commitment, even during periods of underperformance.

Fast forward to 2017 and a study conducted by Willis Tower Watson (WTW) revealed similar patterns. It found that 26% of the 977 global equity funds in the eVestment

database were actively managed and the majority that outshone the benchmark pursued a so-called "high active share" investing style

One of the main reasons active share has usurped tracking error as a popular analytical tool is the mounting scrutiny from regulators such as the Financial Conduct Authority on the high fees active managers charge. "There was a recognition that tracking error only captured part of the story and that it was not a perfect measure of the activity of a portfolio which is why active share is being used for equities," says Quoniam Asset Management senior analyst, fixed income research, Dr Jieyan Fang. "Tracking error mainly indicates factor bets while active share reflects security selection."

Fang adds that while regulatory pressure has been one of the main drivers behind the popularity of active share, investors have also demanded greater transparency to ensure they are getting value for their money from active managers.

Candriam Investors Group deputy CIO Koen van de Maele though believes that while the metric can add information in equity portfolios, it is mostly misleading if only used in isolation and should be used in combination with tracking error. This is because it doesn't give a sufficiently broad picture of a portfolio.

"Active share doesn't show how different the securities are from the

securities in the benchmark," he says. "For example, a telecom stock in the benchmark can be replaced by a similar telecom company, or alternatively something very different as a gold mining stock. In both cases, the active share might be the same.

## Fixed income

Van de Maele believes the challenges are even greater if applied to fixed income. "Active share in equity portfolios can be useful despite its shortcomings but I would ignore the measure of most bond portfolios," he says.

"There are three main dimensions – interest rate, credit and currency risk - and they have always been the main indicators to assess the active risk of fixed income against a benchmark. Also, active share in bond portfolios is difficult to interpret since large companies and countries tend to issue dozens of bonds. No one will buy all these bonds, even if the risk against the benchmark is supposed to remain low. This means that even with a relatively high active share, a bond portfolio can still behave similarly to the benchmark."

WTW senior investment consultant Kate Hollis echoes these sentiments. "Fixed income is multi-dimensional in that you can be matched to a benchmark by percentage allocation to issuer but that does not mean you are matched by duration and currency," she says. "Also, asset managers who invest in bonds use derivatives much more significantly than equity managers which create complexity. For example, if you are buying S&P futures you can sell the index, but if you are using iTraxx to hedge credit there is no relation to the benchmark in terms of issuer exposure."

Not surprisingly, the complicated nature of fixed income also makes it

difficult to apply a standard calculation, according to Morningstar associate director, fixed income strategies, manager research, Mara Dobrescu. “However, there are subsets such as European high yield or corporate investment grade where active share is easier to calculate because the universe of bonds is much smaller than, for example, global bonds, which is highly diversified with different issuers and maturities.”

Fund managers such as MFS Investments are already exploring the potential of using active share in high-yield portfolios. The credit focus and the larger degree of idiosyncratic security-specific risk compared with most other fixed income strategies, suggests that active share may be a particularly relevant risk measure for these portfolios, according to MFS fixed income portfolio manager David Cole.

Like equities, Cole notes that active share can provide valuable information on the drivers of risk and return. MFS research shows that a diversified high-yield credit manager can be active despite a low tracking error. “This is consistent with a high-yield manager’s investment process, which frequently entails minimising systematic risk while seeking to maximise returns from the security selection process,” he adds.

Quoniam Asset Management is also looking at developing an active share approach for credit portfolios. “We are in the process of working on a final version,” says Fang. “The measure will not just be based on weight as in equities but on other factors such as duration to help our clients better understand what managers are doing.”




---

**TRACKING ERROR  
MAINLY INDICATES  
FACTOR BETS WHILE  
ACTIVE SHARE REFLECTS  
SECURITY SELECTION**

Meanwhile, Fidelity International is honing its own approach across the fixed income universe. “To calculate active share of fixed income portfolios, we assess the level of activeness across four dimensions: duration, currency, credit selection and beta-adjusted credit selection,” says Fidelity investment risk director Tim Craigen. “We then adapt the calculation method for each dimension. For instance, to estimate active share of duration, we divide the portfolio (and index) into several buckets on the basis of currency and maturity, and then aggregate them on the basis of contribution-to-duration.”

He adds: “For credit, we simply apply the same approach as used in equities, with market weights applied on an issuer basis with no discrimination between maturity and

currency of bonds held. For beta-adjusted credit selection, we assess the duration-times-spread contributions per issuer and compare that to the index. This helps to understand whether a portfolio has any beta bias that introduces significant active risk.”

As with equities, Craigen believes a combination of measures should be employed to measure performance. “In this low yield, low spread and low volatility environment, there is a risk that tracking error measures understate or misrepresent the true active risk that lurks within a bond portfolio,”

he adds. “We only need to cast our minds back to the financial crisis of 2008/9 to remember the limitations of tracking error models, particularly those that rely on historic data” he adds.

However, there is of course no free lunch. “The active share can be a useful and complementary way to assess the ex-ante activeness of a portfolio and to ensure its sources of active risk are appropriate and intended,” says Caigen. “It should not be viewed as a panacea however, as there are dangers in crudely applying an equity measure in a fixed income world.

Dobrescu also sounds a note of caution. “Investors should not equate a high active share rating with future outperformance,” she adds. “It just means that the fund’s returns are likely to be very different from the benchmark, for better or for worse. Other factors such as tracking error, manager’s skill and the level of risk should also be taken into account.” ■

*In association with*

**Quoniam**  
QUANTITATIVE INVESTMENT ENGINEERING